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11038 Trip Reports

NPIC/TSSG/DED-1382-68
2 October 1968

MEMORANDUM FOR THE RECORD

SUBJECT: High Precision Stereo Comparator, NPIC Project 11038

25X1 1. [redacted] Technical Director, visited NPIC on 24 and 25 September 1968 and [redacted] Project 25X1 Manager for the Comparator, visited NPIC on 25 and 26 September 1968.

2. In the AM of 24 September, [redacted] and the technical monitor 25X1 attended a meeting in TSSG/TSD at which math models for strip photography 25X1 were discussed. [redacted] and three members of his branch along with 25X1 [redacted] of IEG/PHD were able to provide [redacted] with a great deal of 25X1 valuable information for use in his computer programming of correlation and stage tracking functions of the comparator system. [redacted] also 25X1 25X1 arranged for [redacted] to get a briefing and further information on the math model work taking place in the Center. This took place in the PM of 25 25X1 September and [redacted] reports that it was most helpful.

25X1 3. In the PM of 24 September, [redacted] met with [redacted] 25X1 of TSSG/TPD. The electrical interfacing of the Model 35 teletype with the On-Line Central Computer was examined and information exchanged. This problem seems to be pretty well resolved.

4. During the last two hours of 24 September, [redacted] 25X1 of IEG/PHD provided Skiff with additional information on pan photography.

25X1 5. On 25 September, [redacted] gave [redacted] a tour of 25X1 the TSSG/TSD clean room. The laminar flow and the Kozitron filter units were inspected. This is somewhat like the system that will house the [redacted] 25X1 Comparator. A short tour was also made of the proposed site for the comparator on the first floor. Problems of bringing in the granite slabs were discussed and they do not seem to be too serious.

25X1 6. [redacted] and the technical monitor also had a meeting with 25X1 25X1 [redacted] of PSG/AID. [redacted] stated that their Model 35 teletype was wired for an 8 level code and asked if this was acceptable to the central 25X1 computer. [redacted] stated that they used a 7 level code but this was no serious problem since the 8th level is only a parity bit. [redacted] inquired 25X1 about the stereo program for the central computer and [redacted] stated 25X1 25X1 that it is still not on-line. [redacted] stated that part of the programming was completed and that the on-line operation will be ready when the comparator is delivered next year. [redacted] stated that the answers or 25X1 distances computed for the stereo program will not be instantaneous as they are on the mono program. The stereo program will store some of the items in memory and later send back the answer to the computation.

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Some time was spent discussing how the Central Computer and the small DDP-516 computer will share the input/output capability of the Model 35 teletype. [redacted] suggested that this might be a good time for NPIC to assign a programmer to the task of getting acquainted with the 516 computer and the correlation and tracking programs [redacted] and [redacted] will soon be preparing. All agreed to this proposal but the technical monitor said that he would have to query [redacted] Chief of Photogrammetry Division, to see if IEG/PHD, TSSG/TSD, or PSG/AID will do the DDP-516 programming for any future acquisition systems.

7. In the PM of 25 September, [redacted] and the technical monitor met with [redacted] to discuss the conceptual design for the site preparation and the clean room for the comparator. Copies of drawings on the site preparation, air conditioning, and power requirements had been submitted to [redacted] for review prior to this meeting. The plans and performance for the "black box" were studied and [redacted] promised to supply copies of the two bids that are due 27 September 1968. Plans call for the black box to be completed within 120 days of contract date. The possibility of sending the "black box" to [redacted] for checkout with the optical system was discussed.

Several modifications were made to the power requirements to insure that overloads would not occur during certain critical operations. Several changes were also made to the air flow around the operator to insure that a dead space did not occur that would allow dirt to build up. The rate of flow of air from certain lines was modified to insure adequate cooling of critical items.

The machine room was thoroughly reviewed and plans made to allow room for the vacuum pumps and other ancillary equipment. [redacted] requested that the height of the room be increased from 8 ft. to 9 or 10 ft. [redacted] said this would greatly increase the cost of operating the room and said he would attempt to increase the height to a minimum of 8 ft. 6 inches. To provide overhead room for removing the covers of the optical bridge for maintenance on the optics, provisions will be made for an eight foot section of the ceiling to fold back on hinged panels over the bridge of the comparator. [redacted] stated that he was concerned about getting the 85 inch high electronic cabinets through the security vault doors used in [redacted] [redacted] stated that 96" high vault doors would be installed between [redacted] [redacted] that would allow free movement of the cabinets into the site.

Indications are that the close coordination with Logistics and [redacted] have paid off. It looks as though the site and clean room will provide for all the requirements of the Comparator. [redacted] asked when actual construction would begin on the site. [redacted] stated that Logistics was still awaiting NPIC authorization to use [redacted] on an Architectural and Engineering Contract to design the site and clean room.

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8. [redacted] spent most of 26 September in IEG/PHD. [redacted] showed him how some of the mensuration instruments were operated and allowed him to work on some of the instruments that were not busy with production items. [redacted] also spent time observing operators performing mensuration operations on actual production jobs on several different instruments.

Some time was spent discussing just how and why operators perform certain functions in specific orders. The concensus of opinion, with which the technical monitor agrees, is that it might be a good idea for [redacted] to spend some time in November working in IEG/PHD. Teach him the usual measuring procedures and allow him to perform measuring tasks on actual jobs that have been run by IEG/PHD. While he is quite competent to check the quality of the optical system being fabricated by [redacted] he should have a working knowledge of its intended use so as to determine if it is operating properly. Since he will be checking out these operations as a sole judge at [redacted] he should be trained to operate stereo instruments so that he can evaluate from an operational standpoint. If approval is granted by both [redacted] and NPIC management, the week of 18 November 1968 might be a good time for [redacted] to work in IEG/PHG.

9. Arrangements have been made for [redacted] to visit [redacted] on 9 October 1968 and for [redacted] and the technical monitor to visit on 9 and 10 October 1968.

[redacted]

TSSG/DED/R&DB-II

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